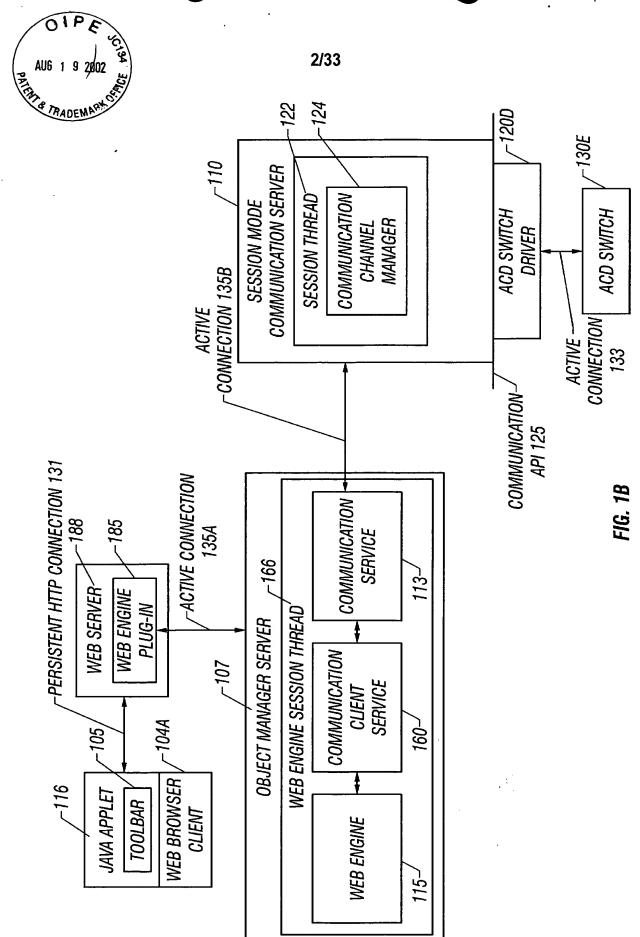
• Î



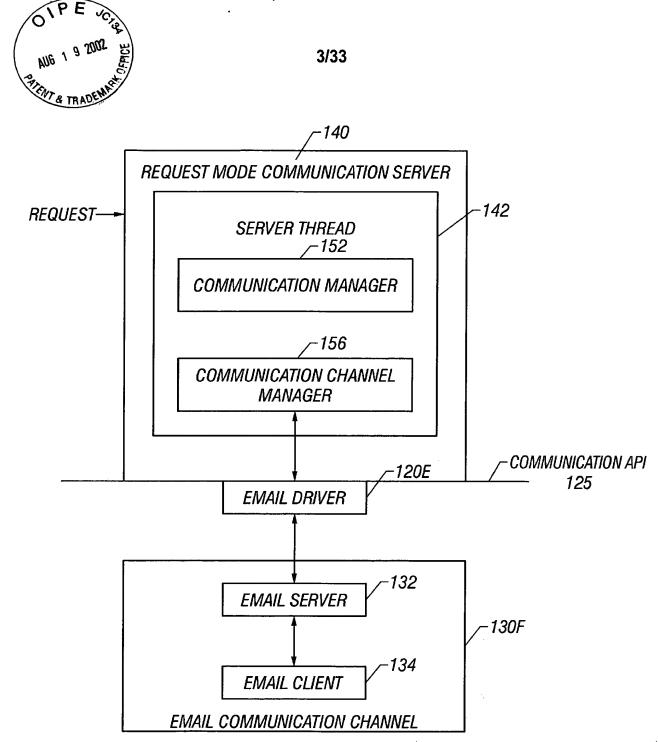
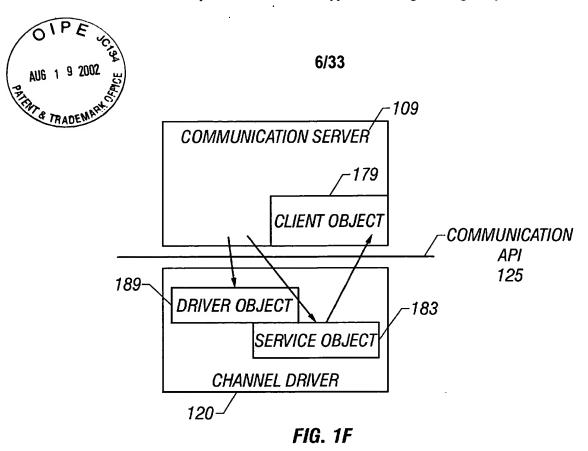


FIG. 1C

0 1

Title: Adaptive Communication Application Programming nterface 4/33 -COMMUNICATION UQ BUSINESS SERVICE -183C -106 PHONE COMMUNICATION -1300 PHONE SERVICE PHONE DRIVER 7-179B | CLIENT OBJECT (PHONE) CHANNEL PHONE **OBJECT** -170 COMMUNICATION CHANNEL MANAGER INBOUND COMMUNICATION RECEIVER 120G--183B 7130H FAX COMMUNICATION SERVER THREAD ~179A | CLIENT OBJECT EMAIL SERVICE CHANNEL OBJECT (EMAIL) 叕 EMAIL/FAX DRIVER **183**4 EMAIL COMMUNICATION 71306 CLIENT OBJECT FAX SERVICE OBJECT CHANNEL EMAIL (FAX) WORKFLOW

SERVER



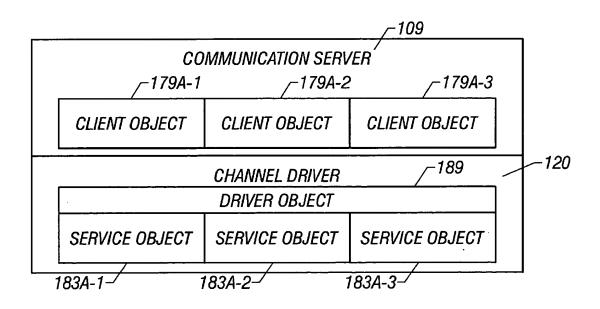


FIG. 1G

Attorney Docket No.: SBL0006US
First Named Inventor: Mingte Chen

Title: Adaptive Communication Application Programming Interface



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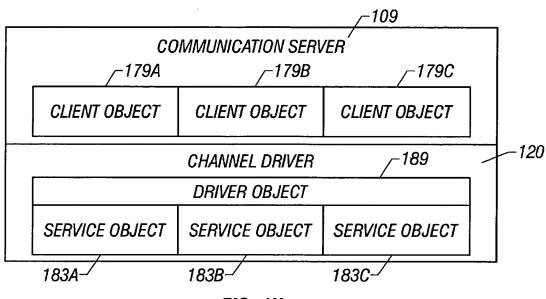


FIG. 1H

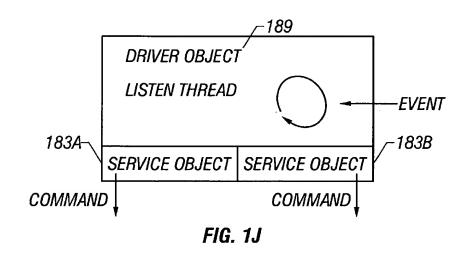
Attorney Docket No.: SBL0006US First Named Inventor: Mingte Chen

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Title: Adaptive Communication Application Programming Interface 8/33 AUG 1 9 2002 SERVICE OBJECT 179F CLIENT OBJECT 183F-SERVICE OBJECT 179E -189B DRIVER OBJECT MIDDLEWARE CLIENT OBJECT SERVER B 183E~ -109 SERVICE OBJECT -179D CLIENT OBJECT -120 COMMUNICATION SERVER 183D CHANNEL DRIVER ~179C SERVICE OBJECT CLIENT OBJECT 183C--179B SERVICE OBJECT CLIENT OBJECT DRIVER OBJECT MIDDLEWARE SERVER A 1894 183B-/ -179A SERVICE OBJECT CLIENT OBJECT **1834**-



0 1



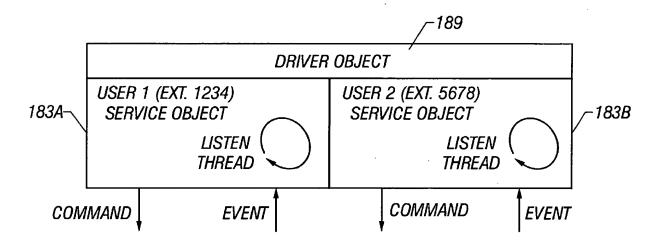


FIG. 1K

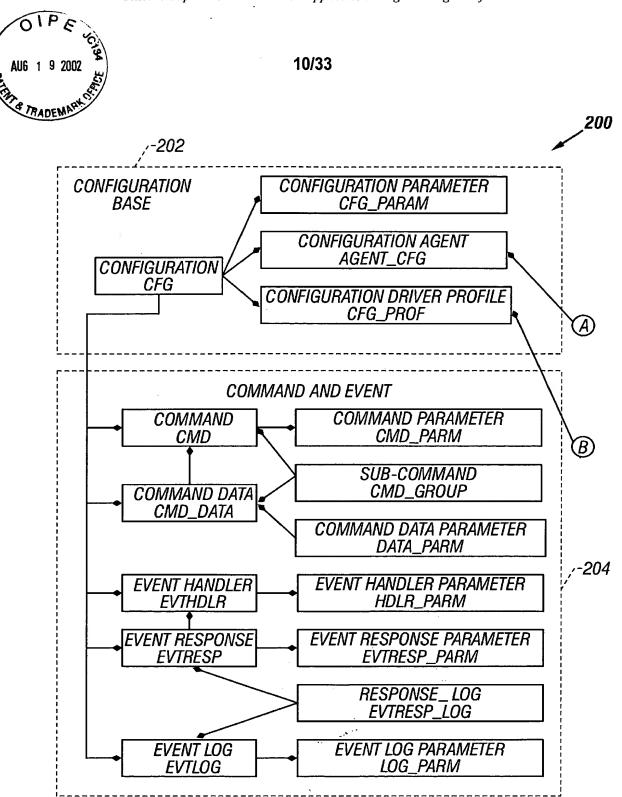


FIG. 2-1

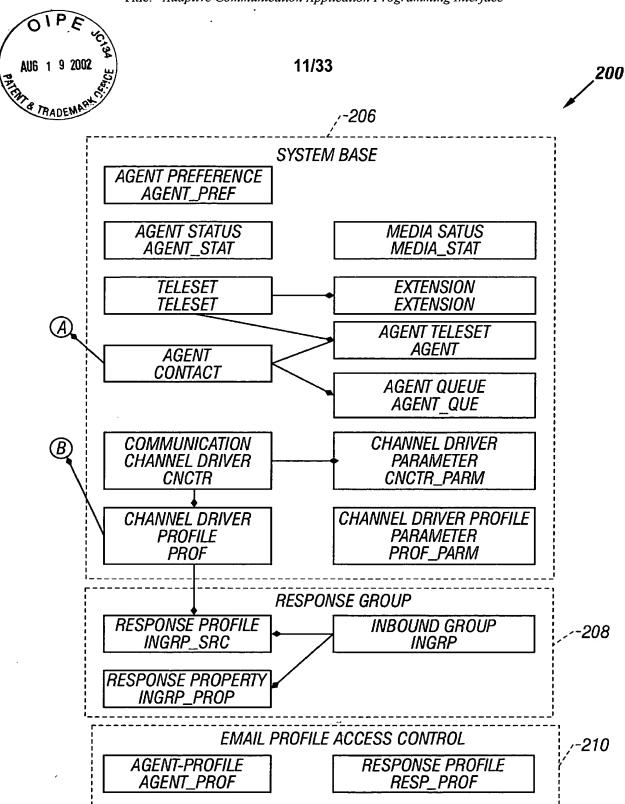
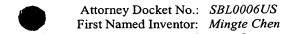


FIG. 2-2





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Column Name	Type	Length	Comments
CNCTR ID	Varchar	15	Identifier for channel driver channel
_			driver CNCTR. CNCTR refers to
			software connector.
NAME	Varchar	75	Name of channel driver.
MEDIA_TYPE	Varchar	50	Media type. The value of this column can
_			be expanded by customer.
LIB NAME	Varchar	250	File name of channel driver DLL
INBOUND FLG	Char	1	To indicate whether this channel driver
_			supports inbound communications
OUTBOUND_FLG	Char	1	To indicate whether this channel driver
			supports outbound communications
CNCTR MEDIA STR	Varchar	100	The media string defined by the driver
			vendor, which will be used at run time to
1			invoke the media service for the channel
			driver.
DESC_TEXT	Varchar	250	Comments
UQ_DRIVER_FLAG	Char	1	To indicate whether this channel driver is
		_	Universal Queuing type of channel driver

### CNCTR, Communication Channel Driver Table

### FIG.\_2a

Column Name	Type	Length	Comments
CNCTR_PARM_ID	Varchar	15	Identifier for channel driver parameter
NAME	Varchar	75	Name of channel driver parameter
DFLT_VALUE	Varchar	250	Default value of channel driver parameter
CNCTR_ID	Varchar	15	
REQUIRED_FLG	Char	1	To indicate whether this parameter must have a value at runtime

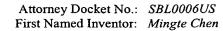
### CNCTR\_PARM, Channel Driver Parameter Table

### FIG.\_2b

Column Name	Type	Length	Comments
PROF_ID	Varchar	15	Identifier for channel driver profile
NAME	Varchar	75	Name of channel driver profile
CNCTR_ID	Varchar	15	

PROF, Communication Channel Driver Profile Table

FIG.\_2c





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Column Name	Type	Length	Comments
PROF_PARM_ID	Varchar	15	Identifier for channel driver profile
			parameter
PROF_ID	Varchar	15	Channel Driver Profile ID
CNCTR_PARM_I	Varchar	15	Parameter name ID
D			
VALUE	Varchar	250	Override value of channel driver
			profile parameter.

PROF\_PARM, Communication Channel Driver Profile Parameter Table

### FIG.\_2d

Column Name	Туре	Length	Comments
AGENT_PREF_ID	Varchar	15	Identifier for agent preference
EMP_ID	Varchar	15	
SETTING_NAME	Varchar	75	Preference name
SETTING_VALUE	Varchar	250	Preference value
SETTING_TYPE	Varchar	50	Preference type, e.g., "CTI" or
			"Communication"

AGENT\_PREF, Agent Preference Table

### FIG.\_2e

Column Name	Type	Length	Comments
AGENT_STAT_ID	Varchar	15	Identifier for agent status
EMP_ID	Varchar	15	Employee ID
PROF_ID	Varchar	15	The channel driver profile ID. Agent has different status for different types of channel driver profiles.
NOT_READY_FL G	Char	1	Is agent not ready?
BUSY_FLG	Char	1	Is agent busy?

AGENT\_STAT, Agent Status Table **FIG.\_2f** 



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Column Name	Туре	Length	Comments
MEDIA_STAT_ID	Varchar	15	Identifier for media status
EMP_ID	Varchar	15	Employee ID
PROF_ID	Varchar	15	The channel driver profile ID of the channel driver profile to which the status corresponds.
MEDIA_OBJECT_ STR	Varchar	250	The string to represent the media object (e.g. the agent's extension number, or the sender's address of an email)
WORKING_SINCE _DT	Date Time	7	Work item starting time
WORK ITEM STR	Varchar	250	Work item ID

MEDIA\_STAT, Communication Media Status Table

### FIG.\_2g

Column Name	Туре	Length	Comments
TELESET_ID	Varchar	15	Identifier for teleset
NAME	Varchar	30	Teleset Name
HOSTNAME	Varchar	70	Hostname of the computer connected to the Teleset.
COMMENTS	Varchar	250	

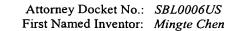
TELESET, Teleset Table

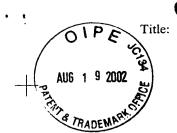
### FIG.\_2h

Column Name	Type	Length	Comments
EXTENSION_ID	Varchar	15	Identifier for extension
TELESET_ID	Varchar	15	Teleset ID
DN_EXT	Varchar	15	Extension Information
EXT_ACD_QUE	Varchar	30	This is the ACD queue to which this
			extension belongs.
EXT_TYPE	Varchar	30	ACD Extension or standard extension
AUTO_LOGIN_FLAG	Char	1	Indicate if we need to login to ACD for
	•		this extension at startup.

EXTENSION, Extension Table

FIG.\_2i





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Column Name	Туре	Length	Comments
AGENT_ID	Varchar	15	Identifier for agent
PR_CFG_ID	Varchar	15	The primary configuration the agent
			uses.
EMP_ID	Varchar	15	Employee ID
ACTIVE_CFG_ID	Varchar	15	The currently active configuration.
ACTIVE_TELESET	Varchar	15	The Teleset that the agent is currently
_ID			using.

### AGENT, Communication Agent Table

### FIG.\_2j

Column Name	Туре	Length	Comments
AGENT_TELSET_ID	Varchar	15	Identifier for agent/teleset
			relationship
AGENT_ID	Varchar	15	Agent ID
TELESET_ID	Varchar	15	Teleset ID

### AGENT\_TELESET, Communication Agent-Teleset Table

### FIG.\_2k

Column Name	Type	Length	Comments
AGENT_QUE_ID	Varchar	15	Identifier for agent/queue relationship
AGENT_ID	Varchar	15	Agent ID
ACD_QUEUE_NA ME	Varchar	30	ACD Queue
AUTO_LOGIN_FL AG	Char	1	Indicates need to login to ACD for this extension at startup.

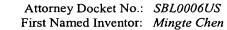
### AGENT\_QUE, Agent-Queue Table

### FIG.\_21

Column Name	Type	Length	Comments
AGENT LIM ID	Varchar	15	Identifier for agent limitation
AGENT_ID	Varchar	15	Agent ID
PROF_ID	Varchar	15	Channel Driver Profile ID that agent
		1	cannot use.

AGENT\_LIM, Communication Agent Limitation Table

FIG.\_2m





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Column Name	Туре	Length	Comments
CFG_ID	Varchar	15	Identifier for configuration
NAME	Varchar	30	Configuration name
INGRP_FLAG	Char	1	To indicate whether this configuration is for inbound response group used in inbound communication receiver.
COMMENTS	Varchar	250	

CFG, Communication Configuration Table

### FIG.\_2n

Column Name	Type	Length	Comments
CFG_PROF_ID	Varchar	15	Configuration/channel driver profile relationship
CFG_ID	Varchar	15	Configuration ID
PROF_ID	Varchar	15	Channel Driver Profile ID

CFG\_PROF, Communication Configuration Channel Driver Profile Table

### FIG.\_20

Column Name	Type	Length	Comments
AGENT_CFG_ID	Varchar	15	Identifier for agent/configuration
			relationship
AGENT_ID	Varchar	15	Agent ID
CFG_ID	Varchar	15	Configuration ID

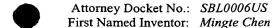
AGENT\_CFG, Communication Agent-Configuration Table

### FIG.\_2p

Column Name	Type	Length	Comments
CFG_PARM_ID	Varchar	15	Identifier for configuration
			parameterand
CFG_ID	Varchar	15	Configuration ID
NAME	Varchar	50	Parameter Name
VALUE	Varchar	50	Parameter Value
ACTIVE FLG	Char	1	Active flag is set if the value is valid

CFG\_PARM, Communication Configuration Parameter Table

FIG.\_2q





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Column Name	Type	Length	Comments
CMD_ID	Varchar	15	Identifier for command
CFG_ID_	Varchar	15	Configuration ID
NAME	Varchar	70	Command name
TYPE	Varchar	50	Command type
PROF_ID	Varchar	15	The channel driver profile ID for the channel driver profile that this command is targeting.

### CMD, Communication Command Table

### FIG.\_2r

Column Name	Type	Length	Comments
CMD_PARM_ID	Varchar	15	Identifier for command parameter
CMD_ID	Varchar	15	Command ID
PARAM_NAME	Varchar	100	Command parameter name
PARAM_VALUE	Varchar	100	Command parameter value

### CMD\_PARM, Communication Command Parameter Table

### FIG.\_2s

Column Name	Type	Length	Comments
CMD_DATA_ID	Varchar	15	Identifier for command data
CFG_ID	Varchar	15	Command ID
NAME	Varchar	100	Command parameter name
Comment	Varchar	200	Comment (optional)

### CMD\_DATA, Communication Command Data Table

### FIG.\_2t

Column Name	Туре	Length	Comments
CMD_DATA_PAR	Varchar	15	Identifier for command data
AM_ID			parameter
CMD_DATA_ID	Varchar	15	Identifier for command data
PARAM NAME	Varchar	100	Command parameter name
PARAM VALUE	Varchar	200	

### CMD\_DATA\_PARAM, Communication Command Data Parameter Table

### FIG.\_2u

Column Name	Type	Length	Comments
CMD_GROUP_ID	Varchar	15	Identifier for group of commands
SUB_CMD_ID	Varchar	15	Foreign key to command table
ORDER	Number	10	Default "0"

CMD\_GROUP, Communication Command Group Table

FIG.\_2v

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Column Name	Type	Length	Comments
EVTHDLR ID	Varchar	15	Identifier for event handler
PROF_ID	Varchar	15	The channel driver profile ID for the channel driver profile from which this event originated.
NAME	Varchar	100	Event name
MEDIA_EVENT	Varchar	100	Identifier for event
ORDER	Number	10	Default "0"
EVT_RESP_ID	Varchar	15	Foreign key to event response table
Comment	Varchar	200	Comment (optional)

EVTHDLR, Communication Event Handler Table

### FIG.\_2w

Column Name	Type	Length	Comments
HDLR_PARM_ID	Varchar	15	Identifier for event handler response
EVT_HDLR_ID	Varchar	15	Identifier for event handler
PARAM_NAME	Varchar	100	Event parameter name
PARAM_VALUE	Varchar	200	Event parameter value

HDLR\_PARM, Communication Event Handler Parameter Table

### FIG.\_2x

Column Name	Туре	Length	Comments
EVTRESP_ID	Varchar	15	Identifier for event response
CFG_ID	Varchar	15	Identifier for configuration
NAME	Varchar	100	Event parameter name
COMMENT	Varchar	200	Comment (optional)

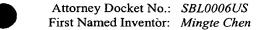
### EVTRESP, Communication Event Response Table

### FIG.\_2y

Column Name	Туре	Length	Comments
RESP_PARM_ID	Varchar	15	Identifier for event response parameter
EVTRESP_ID	Varchar	15	Identifier for event response
PARAM_NAME	Varchar	100	Event response parameter name
PARAM_VALUE	Varchar	200	Event response parameter value

EVTRESP\_PARM, Communication Event Response Parameter Table

FIG.\_2z





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Column Name Length Type Comments EVTLOG\_ID Varchar 15 Identifier for event log CFG ID Varchar 15 Foreign key for configuration table NAME Varchar 100 Event parameter name COMMENT 200 Varchar Comment (optional)

EVTLOG, Communication Event Log Table

### FIG.\_2aa

Column Name	Type	Length	Comments
LOG_PARM_ID	Varchar	15	Identifier for event log parameter
EVTLOG_ID	Varchar	15	Identifier for event log
PARAM_NAME	Varchar	100	Event log parameter name
PARAM_VALUE	Varchar	200	Event log parameter value

LOG\_PARM, Communication Event Log Parameter Table

### FIG.\_2bb

Column Name	Type	Length	Comments
RESP_LOG_ID	Varchar	15	Identifier for response log
EVTRESP ID	Varchar	15	Identifier for event response
EVTLOG_ID	Varchar	15	Identifier for event log
LOG_TYPE	Varchar	100	Type of EventLog declaration specified in EventResponse
			definition.

EVTRESP\_LOG, Event Response-Event Log Table

FIG.\_2cc

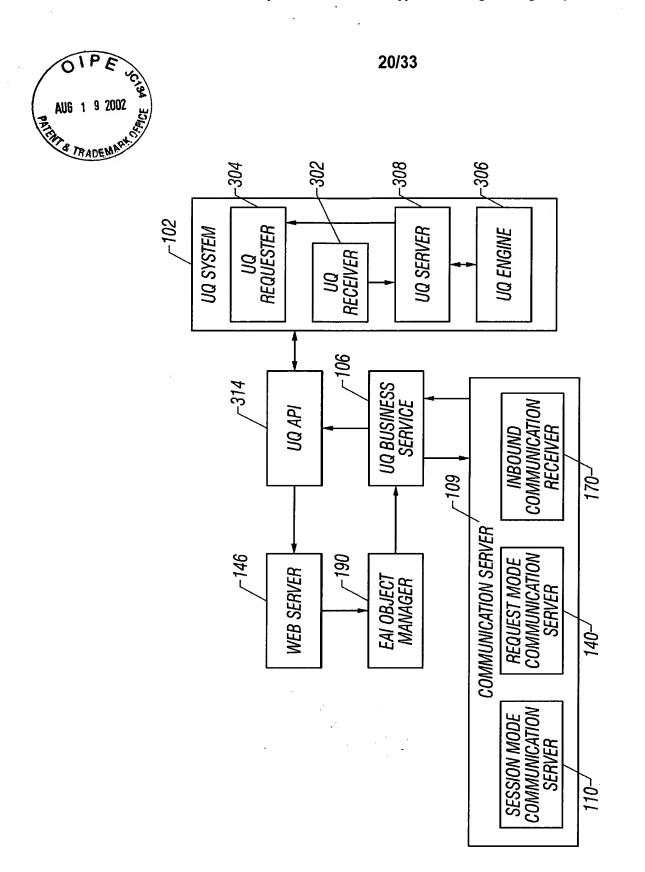


FIG. 3

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Comments Length 72 75 10 75 Number Varchar Number Varchar Varchar RECEIVER NAME RECEIVER PORT SERVER NAME SERVER PORT Column Name

FIG. 4A: TABLE UQ\_CFG

FIG. 4B: TABLE UQ\_CFG\_PARAM

Column_Name	Type	Length	Comments
UQ_CFG_ID	Varchar	15	
NAME	Varchar	50	
VALUE	Varchar	50	

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FIG. 4C: TABLE UQ\_ROUTE

Column_Name	Type	Length	Comments
NAME	VarChar	75	User defined name of the route
MEDIA_TYPE_CD	VarChar	30	Select from value of list. Possible
			values include "PBX", "Web Chat",
			"Web Collaboration", "Fax", "E-
			Mail"
ACTIVE_FLG	Char	1	Indicates whether this route is
			active or not. If the route is not
			active, information for this route
			will not be passed to UQ engine.
PRIORITY CD	Varchar	30	Lower the value, higher the priority.
CAPACITY	Number	10	Maximum capacity of this route.
			Alarm should be generated when
			the number of queued items
			exceeds the CAPACITY
TIME_OUT_SCND	Number	10	Time in seconds in which when the
			work item is not server, the first
			escalation rule will be effective.



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Name of the property Value of the property Comments Length 15 35 Varchar Varchar Varchar Туре Column\_Name UQ ROUTE ID NAME

FIG. 4D: TABLE UQ\_ROUTE\_PROP

FIG. 4E: TABLE UQ\_ROUTE\_ESCL

Column_Name	Туре	Length	Comments
UQ ROUTE ID	Varchar	15	
NAME	Varchar	75	Name of the escalation rules
TIME_OUT_SCND	Number	10	Time in seconds in which the
			escalation rule will be timed out.
			Zero time means waiting
			indefinitely.
SEQ NUM	Number	10	Order of escalation rules



FIG. 4F: TABLE UQ\_RTESCL\_RUL

If skill item is null, it is a substitution of language from the work item data LOV, default Value Comments Skill Length 15 50 30 Varchar Varchar Varchar Varchar Type Column Name ROUTE ESCL SKILL NAME SKILL ITEM EXPERTISE

FIG. 4G: TABLE UQ\_SKL\_MAP

Column_Name	<i>1Npe</i>	Length	Comments	
ROUTE PROP NAME	Varchar	75		
ROUTE_PROP_VALUE	Varchar	75		
SKILL_NAME	Varchar	22		
SKILL VALUE	Varchar	22		



FIG. 4H: TABLE UQ\_USER\_INEDIA

Column_Name	Туре	Length	Comments	
USER_ID	Varchar	15		
MEDIA TYPE CD	varchar	30		г –
MAX NUM SESSIONS	Number	10	Maximum sessions allowed	7

## FIG. 41: TABLE UQ\_ROUTE\_STS

Column Name	Type	Lenath	Comments	O PE J
ROUTE_ID	Varchar	75		)
START_TS	Date Time			
END_TS	Date Time			
SOURCE_NAME	Varchar	75	Route name	<b>.</b>
AVG WAIT TM	Number	10	Waiting time during the given period	
AVG HANDLE TM	Number	10	Handling time during the period	
NUM ABANDONED REQS	Number	10	Number of abandoned requests	
AVG ABANDONING TM	Number	10		26
LONGEST_WAIT_TM	Number	10	Longest waiting time in seconds	/33
AVAIL_USER_PCT	Number	10	Percentage of available agents	-
AUX_WORK_USER_PCT	Number	10	Percentage of auxwork agents	T
TOTAL_NUM_WORKITEMS	Number	10	Total number of agents if each	
			agent handles only one work item	
TOTAL_NUM_UNASSIGNED_WORKITE	Number			<del> </del>
				<del></del>
TOTAL NUM DELIVERED WORKITEM	Number			
TOTAL_NUM_SERVICE_LEVEL_WORKIT EM	Number			
Comments	Varchar	250		T 1



FIG. 4J: TABLE UQ\_MEDIA\_STS

Column_Name	Туре	Length	Comments
MEDIA_TYPE_CD	Varchar	30	
START_TS	Date Time		
END_TS	Date Time		
SOURCE_NAME	Varchar	75	Route name
AVG_WAIT_TM	Number	10	Waiting time during the given period
AVG_HANDLE_TM	Number	10	Handling time during the period
NUM_ABANDONED_REQS	Number	10	Number of abandoned requests
AVG_ABANDONING_TM	Number	10	
LONGEST_WAIT_TIM	Number	10	Longest waiting time in seconds
AVAIL_AGENT_PCT	Number	10	Percentage of available agents
AUX_WORK_AGENT_PCT	Number	10	Percentage of auxwork agents
TOTAL_NUM_WORKITEMS	Number	10	Total number of agents if each
			agent handles only one work item
TOTAL_NUM_UNASSIGNED_WORK   Number   ITEM	Number		
TOTAL_NUM_DELIVERED_WORKIT EM	Number		
TOTAL_NUM_SERVICE_LEVEL_WO Number RKITEM	Number		
Comments	Varchar	250	

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FIG. 4K: TABLE UQ\_AGENT\_STS

Column_Name	Туре	Length	Comments
AGENT_ID	Varchar	15	
START_TS	Date Time	2	
ST_QN3	Date Time	2	
CONTACT_ID	Varchar	15	
AVAIL_PCT	Number		Percentage available
BUSY_PCT	Number		Percentage busy
AUX WORK PCT	Number		Percentage auxwork
NUM COMM ITEM SRVD	Number		Number of work items served
Comments	Varchar	250	

FIG. 4L: TABLE UQ\_ERR\_LOG

Column Name	Туре	Length	Comments
Name	DateTime		
TYPE_CD	Varchar	30	Either alarm or error
Severity	Varchar	30	
ERROR_CODE	Varchar	10	Alarm code or error code
MSG_DESC	Varchar	250	Template for message

FIG. 4IM: S\_JOURNAL

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Column_Name	Туре	Length	Comments
WORK ITEM ID	Varchar	250	Work item ID
ROUTE_NAME	Varchar	22	The name of the route. Use the
			actual name instead of ID because
			the nature of the route could be
		:	changing from time to time.

# FIG. 4N: S\_JOURNAL\_WORKITEM\_PROPERTY

Column_Name	Туре	Length	Comments
JOURNAL_ID	Varchar	15	
Name	Varchar	52	Name of the property
Value	Varchar	22	Value of the property

## FIG. 40: S\_JOURNAL\_ESC\_HIST

Column_Name	Туре	Length	Comments
JOURNAL_ID	Varchar	15	
ESC_STEP_NAME	Varchar	52	
START_TIME	Date Time		Start time
END_TIME	Date Time		
RESULT	Varchar	<i>51</i>	



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Comments Start time Length 15 50 50 Date Time Date Time Varchar Varchar Varchar Varchar Column Name START TIME END TIME JOURNAL REASON USERID

FIG. 4P: S\_JOURNAL\_STATE\_HIST

